

A STUDY OF THE GENUS MIYAKEA MARUMO (LEPIDOPTERA, CRAMBIDAE, CRAMBINAE) FROM CHINA, WITH DESCRIPTION OF ONE NEW SPECIES

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Abstract Three species of the genus *Miyakea* are reported from China, with *M. zhengi* sp. nov. described as new to science. Adult photographs and genitalia of the two species recorded in the Chinese Mainland are provided. A key, a checklist and a distribution map of the known species are given on a worldwide basis.

Key words Lepidoptera, Crambidae, Crambinae, *Miyakea*, new species, China.

The genus *Miyakea* was established by Marumo in 1933 with *Eromene expansa* Butler as the type species. Schouten (1992) revised the genus and reported four species, and Ustjuzhanin & Schouten (1995) added one species to the genus. To date, *Miyakea* comprises five species, mainly distributed in China and its neighboring countries. *Miyakea expansa* occurs in Japan and South Korea; *M. lushanus* is endemic to Chinese Taiwan. *M. sinevi* has been found in Mongolia; *M. raddellus* is distributed in China, Korea and Russia; and *M. ussurica* is described from Russia (Far East) (Fig. 1).

This paper describes one new species *M. zhengi* sp. nov. from Tibet, China. The terminology follows Schouten (1992). A key to all the known species and a distribution map of the genus are provided. All the studied specimens are deposited in the Insect Collection, College of Life Sciences, Nankai University.

Checklist of *Miyakea* Marumo, 1933

Miyakea expansa (Butler, 1881)

Eromene expansa Butler, 1881: 590.

Miyakea expansa (Butler, 1881): Marumo, 1933: 49.

Euchromius expansa (Butler, 1881): Inoue, 1982: 225.

Miyakea raddellus sensu Bleszynski & Collins, 1962 (*nec* Caradja, 1910): 325.

Distribution. South Korea, Japan.

Miyakea raddellus (Caradja, 1910)

Eromene bellus form raddella Caradja, 1910: 115.

Miyakea expansa sensu Bleszynski & Collins 1962 (*nec* Butler, 1881): 325.

Miyakea raddellus (Caradja, 1910): Schouten, 1992: 235.

Distribution. China, Korea and Russia.

Miyakea lushanus (Inoue, 1989)

Euchromius lushanus Inoue, 1989: 2.

Miyakea lushanus (Inoue, 1989): Schouten, 1992: 235.

Distribution. China.

Miyakea sinevi Schouten, 1992

Miyakea sinevi Schouten, 1992: 237.

Distribution. Mongolia.

Miyakea ussurica Ustjuzhanin & Schouten, 1995

Miyakea ussurica Ustjuzhanin & Schouten, 1995: 23.

Distribution. Russia.

Miyakea zhengi sp. nov.

Distribution. China.

Key to world species of *Miyakea* Marumo

1. Outer medial fascia touching apical marking *M. expansa*
Outer medial fascia not touching apical marking 2
2. Terminal black dots arranged in 2 2 2 2 or 2 2 2-1 *M. sinevi*
Terminal black dots arranged in 2 3 2 3
3. Forewing with a longitudinal stripe in basal area
..... *M. zhengi* sp. nov.
Forewing without longitudinal stripe in basal area 4
4. Ostium in female with a rectangular projection *M. ussurica*
Ostium in female with a bifurcate projection or with some very small projecting teeth 5
5. Ostium with a bifurcate projection, costa with a basal process
..... *M. raddellus*
Ostium with some very small projecting teeth, costa without basal process
..... *M. lushanus*

Miyakea zhengi sp. nov. (Figs. 2, 4)

Adult (Fig. 2). Forewing length 16.5–18.0 mm. Frons round, white. Labial palpus yellowish brown, darker near apex; about 2.5 times as long as diameter of eye. Maxillary palpus yellowish brown; apex with spreading scales, white. Antenna with dorsal side white, ventral and lateral sides pale yellow, ciliate ventrally. Thorax white mixed with yellow scales. Tegula white except yellow at apex. Forewing ground colour grayish white mixed with black scales, basal area near costa with a longitudinal yellow stripe; medial fascia double, yellow, inner one conspicuously concave inward, outer one slightly concave inward; two black spots at outside of medial fascia; apex with two oblique yellow stripes; subterminal line yellowish brown, parallel with termen;

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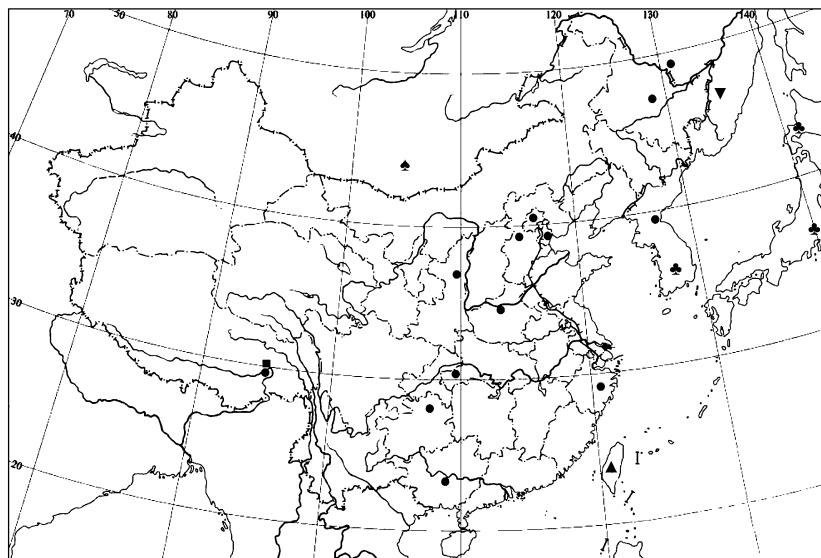


Fig 1. Distribution of *Miyakea* species in the world. ♣ *M. expansa*, ▲ *M. lushmani*, ♠ *M. sinavi*, ● *M. raddledlus*, ▼ *M. ussuriia*, ■ *M. zhengi* sp. nov.

seven black terminal dots in formula 2-3-2; cilia brown. Hindwing white, apex darker; cilia white abdomen gray. Leg pale yellow.

Male genitalia (Fig. 4). Uncus slender, narrow near apex, pointed at apex. Gnathos broad, nearly as long as uncus; apex pointed, with minute dentations. Tegumen narrow. Valva broad and short, sparsely setose; apex rounded, slightly narrowed; processus basalis about 3/4 length of costa, ending with a strong spine. Saccus broad and short, without saccular process; dorsal margin sinuate, ventral margin concave medially. Vinculum U-shaped. Juxta heart like, narrow at base, becoming wide near apex. Aedeagus short and thick, with two apical spines; cornuti composed of a cluster spines of different size.

Female unknown.

Type material. Holotype ♂, Tangmai (30° 09' N, 95° 06' E; alt. 2080 m), Tibet, 5 June 1983, leg. LI Hour-Hun, genitalia slide no. A92128. Paratypes: 2 ♂♂, same data as holotype except 6 June 1983; 1 ♂, Bomi (Bowo) (29° 53' N, 95° 45' E; alt. 2700 m), Tibet, 2 June 1983, leg. LI Hour-Hun.

Distribution. China (Tibet).

Remarks. This species can be distinguished easily from all other species of the genus by the following characters: forewing basally with a longitudinal yellow stripe near costa; costa with processus basalis ending with a strong spine and cornuti composed a cluster spines of different size.

Etymology. This species is named in honor of Professor ZHENG Zhe-Min, a famous entomologist in China.

Miyakea raddledlus (Caradja, 1910) (Figs. 3, 5, 6)

Eromene bellus form *raddledla* Caradja, 1910: 115.

Miyakea expansa sensu Bleszynski & Collins, 1962 (nec Butler, 1881): 325.

Miyakea raddledlus (Caradja, 1910): Schouten, 1992: 235.

Adult (Fig. 3). Wing expanse 17. ♂ 25.0 mm.

Male genitalia see Fig. 5.

Female genitalia see Fig. 6.

Material examined. Jixian, Tianjin, 18 ♂♂, 5 ♀♀, Limutai, alt. 300 m, 11 June 2004; 1 ♂, 5 ♀♀, Mt. Baxian, alt. 500 m, 8-11 Sep. 2005; 1 ♂, Mt. Pan, alt. 170 m, 20 July 2004; 6 ♂♂, 4 ♀♀, Mt. Jiulong, alt. 130-180 m, 9-27 June 2004, leg. LI Hour-Hun *et al.*; Hebei: 9 ♀♀, Qingxiling, Yixian, alt. 100 m, 17-18 July 2000; 1 ♂, 2 ♀♀, Tainingsi, Yixian, alt. 150 m, 19 July 2000; 3 ♀♀, Suanzaoping, Neiqiu, alt. 670 m, 29 July 2000; 2 ♀♀, Suobao, Shexian, alt. 700 m, 31 July 2000, leg. YU Hai-Li *et al.*; 1 ♀, Chengde, alt. 350 m, 12 July 2001; 1 ♀, Hongshankou, Zunhua, 10 July 2001; 1 ♂, Mt. Jing, Chicheng, alt. 850 m, 20 July 2001, leg. DU Yan-Li and Hao Shu-Lian; 1 ♀, Mt. Yingwu, leg. Beijing Forestry University; 1 ♀, Xiaowutai, Weixian, alt. 800 m, 20 Aug. 2005, leg. XIAO Yurr-Li; Zhejiang: 1 ♂, Wuyanling, Taishun, alt. 680 m, 29 July 2005; 1 ♀, Qingliangfeng, Lin'an, 900 m, 8 Aug. 2005, leg. XIAO Yurr-Li; 1 ♀, Houshanmen, Mt. Tianmu, alt. 500 m, 16 Aug. 1999, leg. LI Hour-Hun *et al.*; Henan: 1 ♂, Huangshian, Xixia, alt. 890 m, 16 July 1998; 1 ♀, Xiaguan, Neixiang, alt. 650 m, 12 July 1998, leg. LI Hour-Hun; 2 ♀♀, Shuiliandong, Tongbai, alt. 300 m, 26 May 2000; 1 ♂, 2 ♀♀, Mt. Song, Dengfeng, alt. 800 m, 9 June 2000, leg. YU Hai-Li; 1 ♂, Huangianshu, Jiyuan, alt. 700 m, 6 June 2000, leg. WEI Mei-Cai; Hubei: 1 ♀, Maobaqu, Lichuan, alt. 700 m, 30 July 1999, leg. LI Hour-Hun *et al.*; Guizhou: 3 ♂♂, 7 ♀♀, Suoluo, Chishui, alt. 390 m, 27-29 May 2000; 1 ♂, 1 ♀, Linjiang, Xishui, alt. 500 m, 31 May 2000, leg.

DU Yarr Li; 1 ♂, Linjiang, Xishui, alt. 500 m, 27 Sep. 2000, leg. YU Har Li; Shaanxi: 1 ♂, Chengcheng 1 000 m, 20 July 1996, leg. WANG Shu Xia; 1 ♀, Tiejupu, Danfeng, alt. 680 m, 29 May 1994, leg. ZHOU Jin.

Distribution. China (Beijing, Guangxi, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Shaanxi, Tianjin,

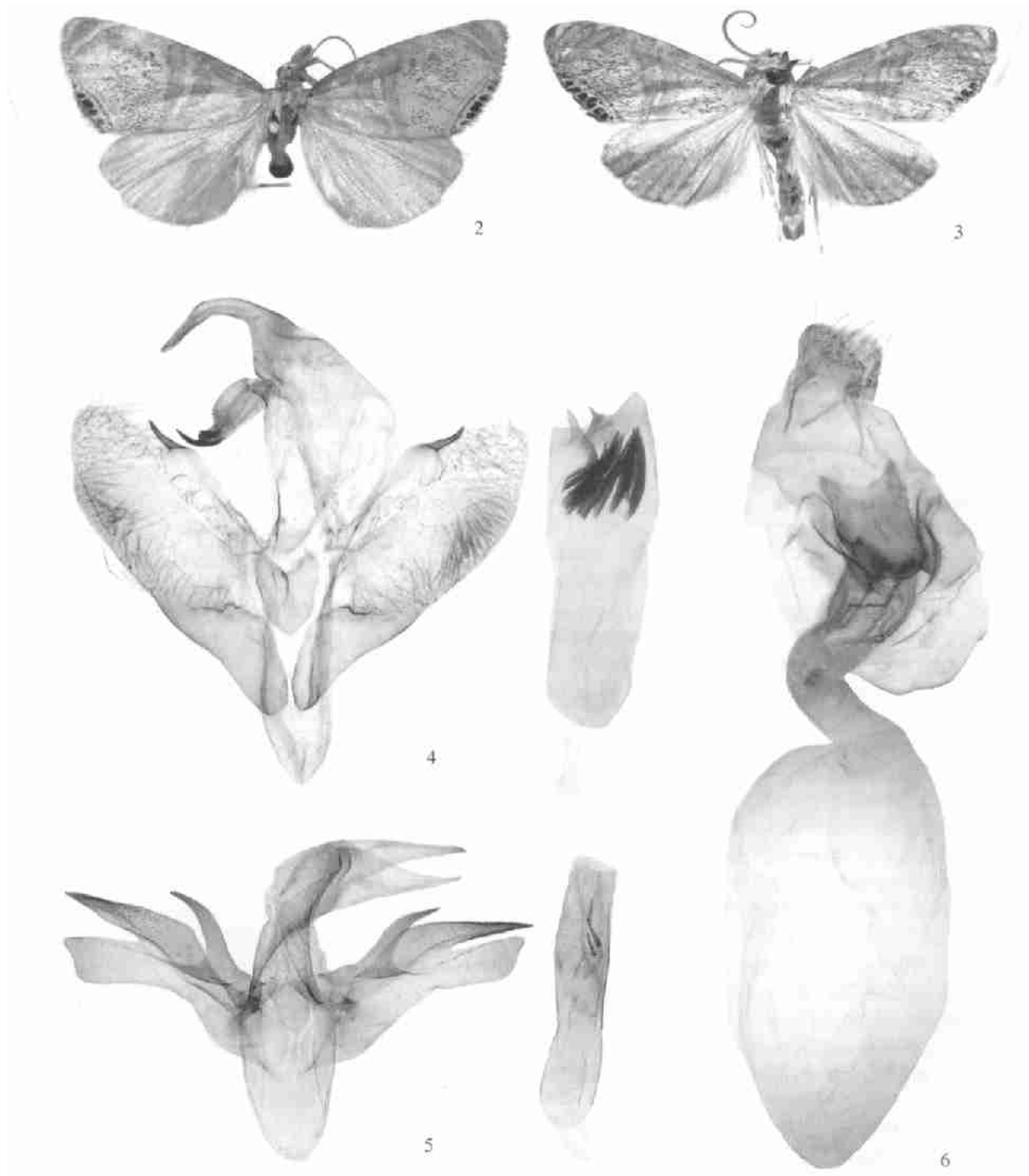
Tibet, Zhejiang), Korea, Russia.

Remarks. The processus basalis of costa in the male genitalia slightly varies in length, and the valva varies in both length and width.

Miyakea lushanus (Inoue, 1989)

Euchromius lushanus Inoue, 1989: 2.

Miyakea lushanus (Inoue, 1989): Schouten, 1992: 235.



Figs. 2-6. *Miyakea* species. 2 3. Adults. 2. *M. zhengi* sp. nov., paratype. 3. *M. raddehlus*. 4 5. Male genitalia. 4. *M. zhengi* sp. nov., holotype (genitalia slide No. A92128). 5. *M. raddehlus* (genitalia slide No. LWC06373). 6. Female genitalia of *M. raddehlus* (genitalia slide No. LHM01028).

Distribution. China (Taiwan).

Remarks. Inoue (1989) described this species based on two specimens collected from Chinese Taiwan. We did not collect this species when we were in Taiwan in July and August, 2006.

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中国双带草螟属研究及一新种记述（鳞翅目，草螟科，草螟亚科）*

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摘要 记录了3种中国双带草螟属 *Miyakea* 昆虫，包括1新种：郑氏双带草螟 *M. zhengi* sp. nov.。文中给出了新种和金双带草螟 *M. radledlus* (Caradja) 的成虫和外生殖器特征图，提供了该属世界已知种的名录、检索表和分布图。研究标本保存在南开大学生命科学学院昆虫标本室。

郑氏双带草螟，新种 *Miyakea zhengi* sp. nov. (图2, 4)
新种前翅基部近前缘有黄色纵纹，抱器背基突末端具一

强刺，角状器由不同大小的刺组成，很容易与其它已知种区别。

正模 ♂，西藏通麦 (30°09' N, 95°06' E; 2 080 m)，1983-06-05，李后魂采，外生殖器玻片号 A92128。副模：2 ♂♂，1983-06-06，采集资料同正模；1 ♂，西藏波密 (29°53' N, 95°45' E; alt. 2 700 m)，1983-06-02，李后魂采。

词源：新种以著名昆虫学家郑哲民教授的姓氏命名。

关键词 鳞翅目，草螟科，草螟亚科，双带草螟属，新种，中国。
中图分类号 Q969.42

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